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CHARACTERISTICS OF GIFTED AND TALENTED YOUTH.

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GIFTED AND TALENTED YOUTHS HAVE SUPERIOR PHYSICAL, SOCIAL, MORAL, AND EMOTIONAL TRAITS, FUNCTION BETTER PERSONALLY AND SOCIALLY, AND HAVE BETTER HOME BACKGROUNDS. THE GIFTED PERSON IS REGARDED AS "ONE WHO DEMONSTRATES CONSISTENTLY REMARKABLE PERFORMANCE IN ANY WORTHWHILE LINE OF ENDEAVOR." PROJECT TALENT ILLUSTRATED THE NEED FOR GREATER INDIVIDUALIZATION OF INSTRUCTION IN HIGH SCHOOL. NON-INTELLECTUAL CHARACTERISTICS, SUCH AS SEX AND EMOTIONAL CONTROL, ARE RELATED TO ACADEMIC SUCCESS. THE NATIONAL MERIT SCHOLARSHIP PROGRAM REVEALED THAT EXCEPTIONAL STUDENTS ARE MARKED WITH CONTINUED ACADEMIC SUCCESS, ARE USUALLY THE FIRST-BORN, FROM SMALL FAMILIES, AND ARE PERSONALLY MORE INDEPENDENTLY ORIENTED. VARIOUS INDIVIDUALS INVESTIGATING COLLEGE PROTEST MOVEMENTS FEEL THAT THE PARTICIPANTS ARE, IN GENERAL, MORE INTELLIGENT, MORE INDEPENDENT, MORE RECEPTIVE TO NEW CONCEPTS, MORE ETHICAL, AND TEND TO DO BETTER ACADEMICALLY THAN THE AVERAGE STUDENT. THE GENETIC CONSEQUENCES OF COLLEGE ROMANCES AND MARRIAGE MAY BE AN INCREASE IN THE NUMBER OF GIFTED INDIVIDUALS. HOWEVER, BRIGHT CHILDREN STILL ARE BEING OVERLOOKED. THIS PAPER WAS PRESENTED AT A WORKSHOP SPONSORED BY SCIENCE RESEARCH ASSOCIATES FOR TEACHERS OF GIFTED AND TALENTED YOUTH, DOLTON, ILLINOIS, FEBRUARY 16-17, 1967. (WR)

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Characteristics of Gifted and Talented Youth

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Western culture, throughout history, has been intrigued by the talented individual. In the first chapter of Daniel, the Old Testament chronicler relates how "the king commanded Ashpenaz...to bring...youths without blemish, handsome, and skillful in all wisdom, endowed with knowledge, understanding, learning, and competent to serve in the king's palace, and to teach them the letters and language of the Chaldeans." Giftedness has not always been so highly respected throughout history. A widely-accepted theory, given alleged scientific credence by Cesare Lombroso and J. F. Nisbet in the latter part of the nineteenth century, held that high mental endowment and creativity were genetically coupled with degeneracy, insanity, and instability.

The first systematic study of gifted youth was published by L. M. Terman in 1925. Terman's data on 1,500 children scoring in the highest one per cent of the population on mental ability tests demonstrated that these children possessed generally superior physical, social, moral, and emotional traits and were markedly superior in the mastery of school subjects. Follow-up studies by Terman and his associates (1947; 1959) demonstrated that the gifted person was less subject to physical dysfunction and emotional instability than would be expected of individuals in the general population.

Terman (1924) insisted that from the ranks of the children making high scores on intelligence tests, "and from nowhere else, our geniuses in every line are recruited." However, recent research (Getzels and Jackson, 1962; Torrance, 1960) has demonstrated that many young people with intelligence test scores in the average range place in the highest categories on tests of originality and creative thinking.

This paper has been prepared for presentation at a workshop sponsored by Science Research Associates for teachers of gifted and talented youth to be held in Dolton, Ill., on February 16 and 17, 1967. A shorter form of this paper is scheduled for publication in a special issue of Education magazine titled "The Gifted and the Academically Talented."

Yamamoto (1961) stated that if the gifted person is thought of only in terms of high intelligence, almost 70% of the most highly creative individuals in our society would be overlooked. As a result of these data, a broader definition of talent has been accepted by most professional workers in the field; the gifted person is now generally regarded as one who demonstrates consistently remarkable performance in any worthwhile line of endeavor, whether it be academic skills, mechanical skills, music, creative writing, dramatics, or social leadership (Witty, 1940, 1952, 1965).

A series of studies by M. I. Stein (1957) indicates that the creative person is less authoritarian and less anxiety-ridden than the non-creative person. In addition, creative individuals, in general, are more independent, more dynamic, more practical, more utilitarian, and better integrated. They show wiser judgment, a greater degree of self acceptance and self knowledge, and have a better sense of humor than non-creative people. The creative person, according to Stein, tends to work slowly in the initial stages of a problem-solving situation but rapidly in its final stages. Creative people prefer projects involving complexity, novelty, and decision-making to tasks that are cut and dried. Many creative people do well on mental ability tests but high intelligence, according to Stein, is not universally found among creative individuals.

Most of Stein's findings resemble those reported by W. W. Purkey (1966) in a study of 95 gifted high school students and 63 students of average ability. The gifted students made significantly higher scores than did the average students on measures assessing successful personal and social functioning. However, both groups made similar scores on the measures of self confidence, self insight, and self acceptance.

Dauw (1966) studied 319 high school seniors, dividing them into high and low creative thinkers on the basis of Torrance's Minnesota Tests of Creative Thinking. He found that the highly creative students had parents of higher socioeconomic status than the low creative seniors. Furthermore, the parents had better educational backgrounds and took a greater interest in their children. The disciplinary pattern of the highly creative students was consistent, while the low creative

group's parents were inconsistent in their discipline. The home backgrounds of creative individuals have been found to differ from those of other persons by several other investigators (Roe, 1953; Goertzel and Goertzel, 1962).

Project Talent

A comprehensive study of the abilities of American youth was undertaken by the directors of Project Talent in 1960. The project's testing program involved about 440,000 students in the ninth, tenth, eleventh, and twelfth grades in 1,353 public, private, and parochial schools. Administrators of these institutions, which comprised about five per cent of all high schools in the United States, completed questionnaires on their academic offerings and guidance programs. As a result of these two types of data collection, more than 2,000 items of information per student were collected as well as over 1,000 items per school. In 1963, retesting was inaugurated to assess changes occurring over the last three years of high school and several supplementary testing programs were begun. Follow-up studies are planned at five year intervals (Flanagan, et al., 1964).

One basic finding of Project Talent's investigators was that about 25 per cent of the ninth grade students had reached a higher level of academic achievement than that attained by the average twelfth grade student at the time of his graduation from high school (Flanagan, 1962). It was suggested that this situation "indicates the desirability of adapting instruction to individual student needs rather than giving them all the same instructional program." The need for greater individualization of instruction was also demonstrated by the finding that the top five per cent of the students learn new information at twice the rate of the average student. An optimal instructional program, therefore, should begin at the level the student has already attained and proceed at the rate most appropriate for that student.

Other data indicated that economic factors (such as the beginning salary paid to teachers) were significantly related to the amount of learning by the students. Neither the number of students in a school nor the students' location in an urban rather than a rural area were substantially related to the amount of learning. In

other words, large "comprehensive" urban schools are not necessarily the answer to the needs of gifted students; well-paid, competent teachers who can diversify instruction are far more important to the development of students' potentials.

Project Talent's investigation of non-intellectual characteristics (as measured by the Student Activities Inventory and other devices) yielded provocative results when the students' personality traits were compared with their academic achievement (Orr, 1962). For boys, the measures of self confidence, social sensitivity, vigor, calmness, and personal maturity were significantly related to tested achievement in such areas as English, reading skills, and mathematics. For girls, only personal maturity was associated with academic achievement. It was suggested that girls have a somewhat easier time in controlling their emotions and that this factor would reduce the relationships between personality traits and school achievement. Boys have a more difficult time bringing their emotional energy under control; those who are able to handle their impulse life more easily do well academically because they can channel sufficient energy toward learning tasks.

An analysis of specific test responses further demonstrated the connection between emotional control and academic achievement. High-achieving boys typically responded affirmatively to such items as "I am usually self-controlled" and "People consider me level-headed." Also related to high academic achievement for boys were affirmative answers to such items as "I am full of pep and energy" and "I am vigorous," suggesting that there was abundant emotional vigor for the high-achieving boys and that this vigor was capably directed and easily channeled.

Research with Talented College Students

A number of studies have been reported which involved gifted college students. Winners of the National Merit Scholarship Program have been followed up for several years; consistently, they have obtained remarkable scholastic records during their stay in college. In addition, it has been discovered that the National Merit scholars characteristically are first born children and that they come from small families, their average number of siblings being between one and two (Abraham, 1958).

In this regard, the National Merit scholars resemble Terman's gifted group, the members of which were frequently first born children from small families (1947).

In a study of 1,184 National Merit finalists and semifinalists, Nichols and Davis (1964), found marked differences between the National Merit group and other college seniors. The National Merit group was less oriented to social and athletic interests, more idealistic and rebellious, and less conventional in their religious beliefs.

I. J. Lehmann (1963) studied the attitudes and critical thinking abilities of college students using a number of tests and inventories. He reported that students withdrawing from college were more rigid in their beliefs, tended to think in terms of stereotypes, demonstrated less critical thinking ability, and made lower scores on tests of academic ability than students who completed college. Of those who completed college, positive changes were noted in such attitudinal areas as tolerance, insight, social concern, and responsibility. The changes in critical thinking that were noted by Lehmann, for the most part, occurred by the end of the students' junior year.

Research and The College Protest Movement

Of current interest to many researchers is the college "protest movement." The general university population generally includes a sizable minority whose behavior is marked by various types of non-conformity and rebellion. In 1967, The American Council on Education reported that at least 15 per cent of college freshmen participated in protest demonstrations either in high school or during their freshman year. Contemporary protest movements center around opposition to the nation's conduct of the war in Viet Nam, concern with civil rights legislation and its effect on ethnic minorities, and opposition to certain policies enforced by university officials. The use of psychedelic substances such as LSD to induce alterations of consciousness is a more recent expression of student protest; extensive studies to determine the extent of this practice are now in progress at the Chicago Medical School and the New Jersey Neuro-Psychiatric Institute.

Paul Heist (1966) investigated students involved in the "Free Speech" movement at the University of California at Berkeley, utilizing the Omnibus Personality Inventory and student background data. He concluded that the movement was predominantly composed of capable students who had left high school with good academic records and who had maintained high grades while at the university. Heist stated that the majority of these students were characterized by "their high mental ability, their autonomy and freedom to choose, their readiness for new ideas and new experiences, their ethical concerns..., their interests in a good education, and their strong and intrinsic intellectual orientations." These students "represented the qualities and attitudes which most teachers seek in their best students." Christian Bay surveyed the research literature in 1966, concluding that students active in protest movements tended to do better academically and were more intelligent and more intellectually disposed.

R. E. Peterson (1966) distinguished three basic areas of student protest: issues pertaining to instruction, faculty, and freedom of expression; issues bearing on personal freedom and on student participation in a college's administration; issues which were of wider scope than that of the college campus (civil rights, Viet Nam, etc.). After surveying the administrative deans of nearly 850 colleges, Peterson reported that the civil rights issue was the most frequently cited cause for protest (affecting 38 per cent of the campuses) followed by controversy over group living regulations (28 per cent), Viet Nam (21 per cent), student participation in policy making (13 per cent), university rules regarding controversial speakers (9 per cent), alleged curriculum inflexibility (7 per cent), and academic freedom (4 per cent). The type of institution was a determinent of student activism; the incidence of organized opposition to the nation's policy in Viet Nam ranged from 61 per cent at independent universities to 8 per cent at church-affiliated institutions to 6 per cent in teachers colleges. Peterson suggested that the students' intellectual aptitudes and interests were also associated with the protest movement:

> There is every indication that the number of student activists has been multiplying in the past five years. How is the rise of this "new student activism" to be explained? Since they are disproportionately enrolled in selective colleges and universities, students actively concerned with broad social and moral issues are undoubtedly concentrated at the high end of the intellectual ability distribution; they are bright enough to detect and comprehend some of what ails American society. In this vein, judging from the relative peace at teachers colleges and technical institutes, it would seem that the intellectual interests of the student activists tend toward the liberal arts and sciences; their commitments are more toward ideas than jobs. Their intellectual bent probably emphasizes comparing and criticizing rather than mastery of facts and skills. In short, because of some combination of genetic and environmental circumstances, these youths have acquired an intellectual style that has lent itself well to critical examination of what is going on around them.

Counterposed against this group of intelligent, independent, critically-minded students, there sometimes stands a college with large classes, intense competition for grades, bureaucratic dealings with students, parent-like control of students' personal lives, and many faculty members disinterested in teaching and unaware of students' needs. For many able young men and women, the encounter with such a college or university is a disappointment; out of frustration, many have looked to the protest movement for sources of commitment that are more fulfulling than that which is available in the classroom.

In the meantime, there is some indication that the number of gifted individuals will increase in future generations. J. R. Platt (1964) noted that the brightest 10 per cent of young Americans are now being thrown together on college campuses at the most susceptible age for romance and marriage. The genetic consequence of this situation may be a rise in the proportion of gifted children because random matches were more typical in former eras when a greater proportion of talented young people did not go to college. Platt further stated, "Even more spectacular children may be coming out of the intellectual colonies like Oak Ridge or Los Alamos, where one man in six has a Ph.D., and out of the faculty communities of the great universities, where all the men and many of the women have advanced degrees." At this rate, concluded Platt, "we may have a dozen Newtons within 20 years."

Nevertheless, society still allows many of its brightest young people to pass by unnoticed. In Tulsa, Oklahoma, doctors recently discovered a 17-year-old boy in

a school for the mentally handicapped who scored in the very superior range on mental ability tests. As the boy was deaf, he had been sent to a state institution at an early age. His high mental ability was not suspected until an employee left a transistor radio kit on a work table and the boy easily assembled it, after studying the intricate diagrams and instructions.

A few years ago, an army recruit in Virginia was tagged as a "clerk typist" until a university professor intervened and called him "the most outstanding mathematical genius I have encountered in 30 years." A French draftee who dropped out of school to help his father care for the family farm made such a high score on army aptitude tests that the colonel in charge accused him of cheating. He scored even higher on the retests; army records disclosed only one comparable score among 40,000 recruits.

Conclusions

It is apparent that most school systems have not reached a stage where creativity is properly cultivated or where giftedness is widely appreciated. The available research demonstrates the divergency of young people's abilities in high school and college. When an alert, inquisitive individual lacks stimulation from a responsive home, school, or community environment, he often fails to develop his potential fully (Torrance, 1962).

The ranks of the gifted contain many underachievers; this inability to maximize one's ability is a more likely factor in emotional disturbance among the talented than the genetic link proposed at one time. The scope of student protest at colleges and universities demonstrates that professors and administrators -- the very people who should be most capable of stimulating creativity, individualizing instruction, and meeting students' existential needs -- are sometimes inept caretakers of America's most valuable resource, its gifted individuals.

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